DINOX Network Video Recorder

Quick Operation Guide

UD.6LX0202B1276A02

Thank you for purchasing our product. If there is any question or request, please do not hesitate to contact dealer.

NVR Pre-Installation

The NVR-4004/4008 series NVR are highly advanced surveillance equipment that should be installed with care. Please take into consideration the following precautionary steps before installation of the NVR.

1. Keep all liquids away from the NVR.
2. Install the NVR in a well-ventilated and dust-free area.
3. Ensure environmental conditions meet factory specifications.
4. Install a manufacturer recommended HDD.

NVR Installation

During the installation of the NVR:

1. Use brackets for rack mounting.
2. Ensure there is ample room for audio and video cables.
3. When installing cables, ensure that the bend radius of the cables are no less than five times than its diameter.
4. Connect both the alarm and RS-485 cable.
5. Allow at least 2cm (~0.75-inch) of space between racks mounted devices.
6. Ensure the NVR is grounded.
7. Environmental temperature should be within the range of -10 ºC ~ 55 ºC, 14ºF ~ 131ºF.
8. Environmental humidity should be within the range of 10% ~ 90%.

Hard Disk Installation

Before you start:

Before installing a hard disk drive (HDD), please make sure the power is disconnected from the NVR. A factory recommended HDD should be used for this installation.

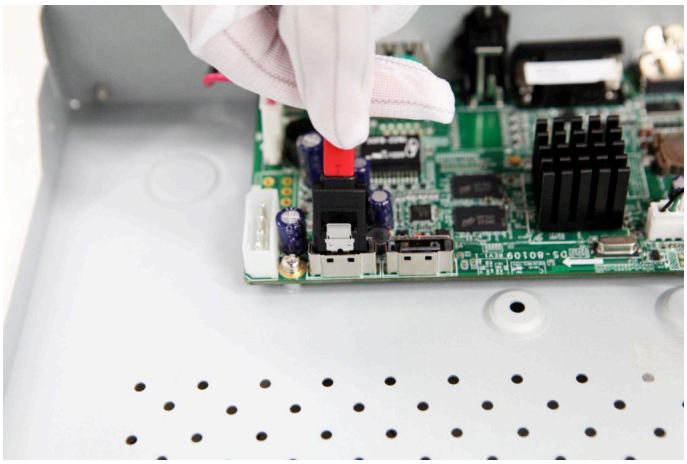
Up to 2 SATA hard disks can be installed on your NVR.

Tools Required: Screwdriver.

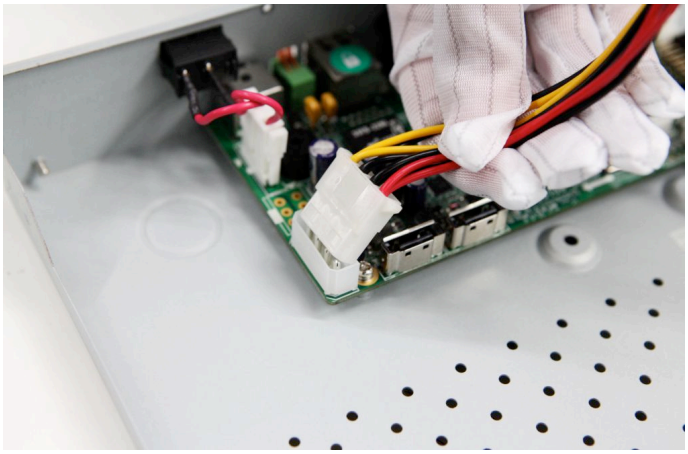
Steps:

1. Remove the cover from the NVR by unfastening the screws on the back and side.

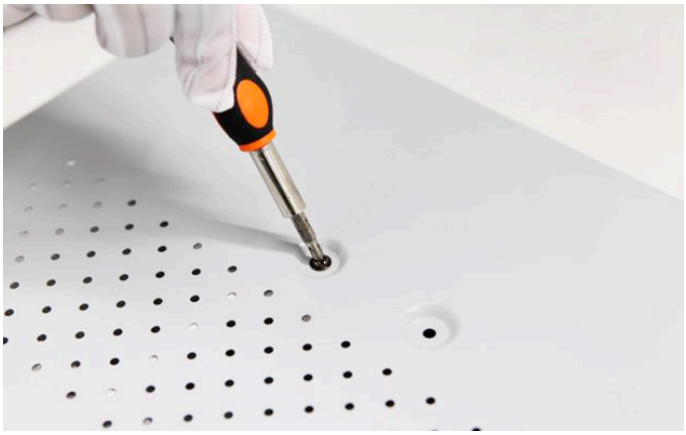
2. Connect one end of the data cable to the motherboard of NVR and the other end to the HDD.



3. Connect the power cable to the HDD.



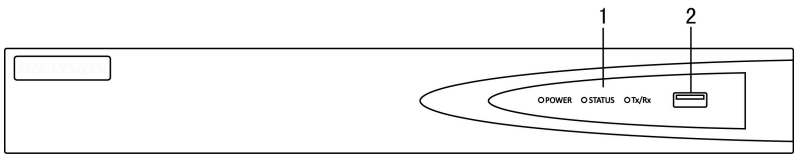
4. Place the HDD on the bottom of the device and then fasten the screws on the bottom to fix the HDD.



5. Re-install the cover of the NVR and fasten screws.

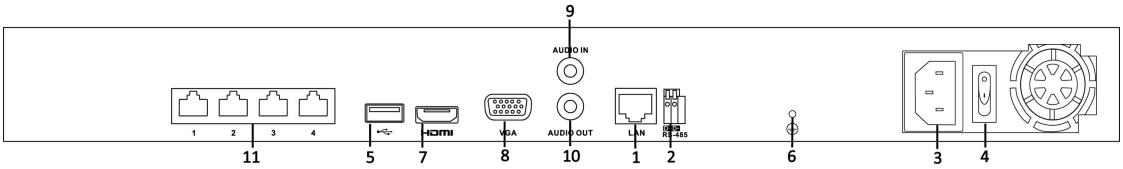
Front Panel

NVR-4004/4008



No.	Name		Description
1	Status Indicator	Power	Power indicator turns yellow when system is running.
		Status	Status indicator blinks red when data is being read from or written to HDD.
		Tx/Rx	TX/RX indictor blinks yellow when network connection is functioning properly.
2	USB Interface		Universal Serial Bus (USB) ports for additional devices such as USB mouse and USB Hard Disk Drive (HDD).

Rear Panel



NVR-4004/4008

No.	Item	Description
1	LAN Network Interface	Connector for LAN (Local Area Network).
2	RS-485 Interface	Connects to RS-485 devices.
3	Power Supply	100~240VAC power supply
4	Power Switch	Switch for turning on/off the device.
5	USB Interface	Universal Serial Bus (USB) ports for additional devices such as USB mouse and USB Hard Disk Drive (HDD).
6	GND	Ground (needs to be connected when NVR starts up).
7	HDMI Interface	HDMI video output connector.
8	VGA Output	DB9 connector for VGA output. Display local video output and menu.
9	Audio In	RCA connector for voice talk input
10	Audio Out	RCA connector for audio output
11	Network Interfaces with PoE function (for NVR-4004/4008)	Network interface for the cameras and to provide power over Ethernet.

Specifications

Model		**NVR-4004**	**NVR-4008**	**-**
Video/Audio input	**IP video input**	4-ch	8-ch	16-ch
	Two-way audio input	1-ch, RCA (2.0 Vp-p, 1kΩ)		
Network	**Incoming bandwidth**	20Mbps	40Mbps	80Mbps
	Output bandwidth	40Mbps		
	Remote connection	128		
Video/Audio output	**HDMI/VGA output**	1-ch, resolution: 1920 × 1080P /60Hz, 1600 × 1200 /60Hz, 1280 × 1024 /60Hz, 1280 × 720 /60Hz, 1024 × 768 /60Hz		
	CVBS (optional)	1-ch, BNC (1.0 Vp-p, 75 Ω) Resolution: 704 × 576 (PAL); 704 × 480 (NTSC)		
	Audio output	1-ch, RCA (Linear, 1kΩ)		
Decoding	**Live view / Playback resolution**	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF		
	Capability	4-ch, 720P / 2-ch, 1080P / 1-ch, 5MP	8-ch 4CIF /4-ch, 720P / 2-ch, 1080P / 1-ch, 5MP	
Hard disk	**SATA**	2 SATA interfaces for 2 HDDs		
	Capacity	Up to 4TB for each disk		
External interface	**Network interface**	1 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interface		
	Serial interface	1 RS-485 half-duplex interface		
	USB interface	2 × USB 2.0		
	Alarm in/out (optional)	4/1		
PoE	**Interface**	4 independent 10 /100 Mbps PoE Ethernet interfaces		8 independent 10 /100 Mbps PoE Ethernet interfaces
	Output Consumption	52W		120W
	Supported Standard	AF		
Others	**Power supply**	100~240VAC, 47~63Hz, 3A		
	Consumption	≤ 15 W (without hard disk)		
	Working temperature	-10 ºC ~ +55 ºC (14 ºF ~ 131 ºF)		
	Working humidity	10 % ~ 90 %		
	Chassis	19-inch rack-mounted 1U chassis		
	Dimensions (W × D × H)	445 × 290 × 45mm (17.5 × 11.4 × 1.8 inch)		
	Weight	≤ 2 Kg (without hard disk)		

HDD Storage Calculation Chart

The following chart shows an estimation of storage space used based on recording at one channel for an hour at a fixed bit rate.

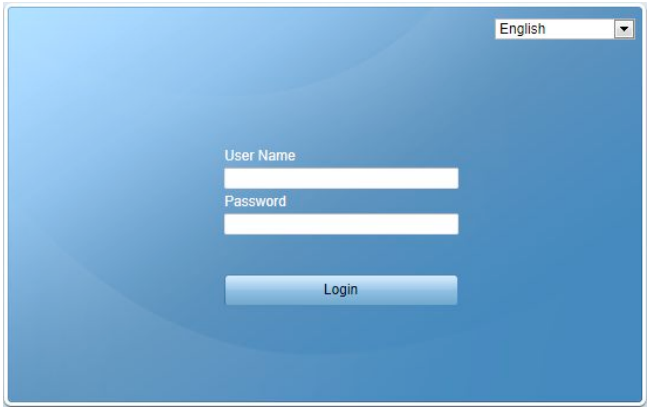
Bit Rate	Storage Used
96K	42M
128K	56M
160K	70M
192K	84M
224K	98M
256K	112M
320K	140M
384K	168M
448K	196M
512K	225M
640K	281M
768K	337M
896K	393M
1024K	450M
1280K	562M
1536K	675M
1792K	787M
2048K	900M
4096K	1800M
8192K	3600M
16384K	7200M

Please note that supplied values for storage space used is just for reference. Storage space used is estimated by formulas and may have some deviation from actual value.

Accessing by Web Browser

Logging In

You can get access to the device via web browser. Open web browser, input the IP address of the device and then press Enter. The login interface appears.



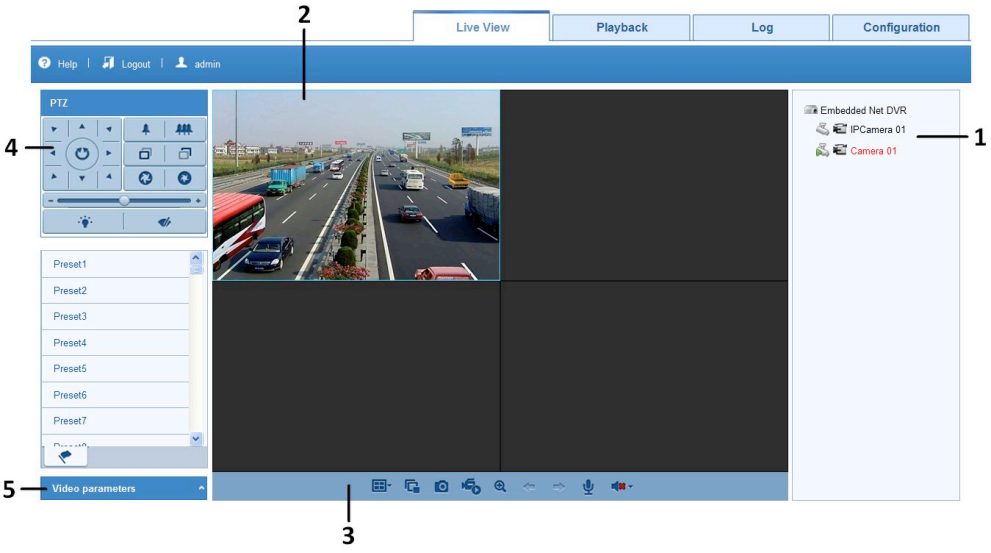
Input the user name and password, and click the Login button.

- The default IP address is 192.0.0.64.
- The default user name is admin, and password is 12345.
- You may use one of the following listed web browsers: Internet Explorer 6.0, Internet Explorer 7.0, Internet Explorer 8.0, Internet Explorer 9.0, Internet Explorer 10.0, Apple Safari, Mozilla Firefox, and Google Chrome.
- The supported resolutions include 1024*768 and above.

When you log in for the first time, the system will remind you to install the Plug-in control. After the installation, you can configure and manage the device remotely.

Live View

The live view interface appears by default when you log in the device.



Live View Interface Introduction

No.	Name	Description
1	Channel List	Displays the list of channels and the playing and recording status of each channel.
2	Live View Window	Displays the image of channel, and multi-window division is supported.
3	Play Control Bar	Play control operations are supported.
4	PTZ Control	Pan, tilt, zoom operations are supported, as well as preset editing and calling. NOTE PTZ function can only be realized if the connected camera supports PTZ control.
5	Video Parameters Configuration	Brightness, contrast, saturation and hue of the image can be modified.

Start Live View

Steps:

1. In the live view window, select a playing window by clicking the mouse.
2. Double click a camera from the device list to start the live view.
3. You can click the button on the toolbar to start the live view of all cameras on the device list.

Refer to the following table for the description of buttons on the live view window:

Icon	Description	Icon	Description
	Select the window-division mode		Start/Stop All Live View
	Capture picture during live view		Start/Stop All Recording
	Enable/Disable Digital Zoom		Previous/Next Page
	Start/Stop Two-way Audio		Open/Close Audio
	Adjust Volume		

Recording

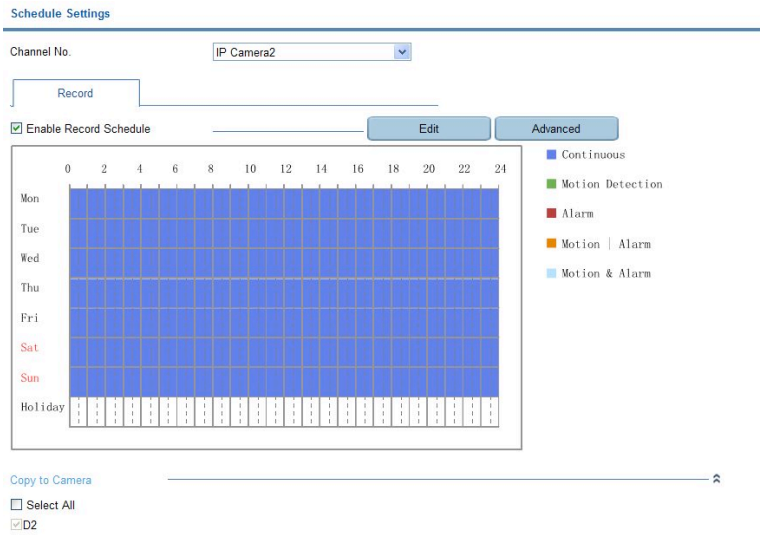
Before you start:

Make sure the device is connected with HDD or network disk, and the HDD or network disk has been initialized for the first time to use.

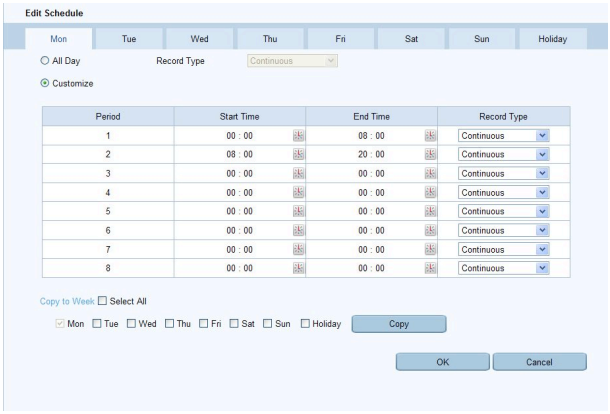
Two recording types can be configured: Manual and Scheduled. The following section introduces the configuration of scheduled recording.

Steps:

1. Click Remote Configuration> Camera Settings> Record Schedule to enter Record Schedule settings interface.
2. Select the camera to configure the record schedule.
3. Check the checkbox of **Enable Schedule** to enable recording schedule.



4. Choose the day in a week to configure scheduled recording.
5. Click **Edit** to edit record schedule**.**



1) Configure All Day or Customize record:
   - If you want to configure the all-day recording, please check the **All Day** checkbox.
   - If you want to record in different time sections, check the **Customize** checkbox. Set the **Start Time** and **End Time.**

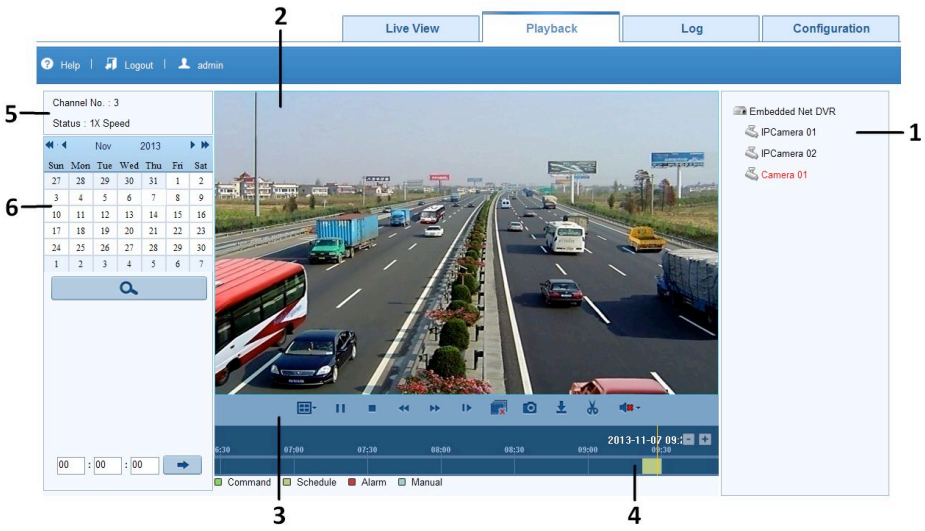
   NOTE

   The time of each segment cannot be overlapped. Up to 8 segments can be configured.

2) Select a **Record Type**. The record type can be Normal, Motion, Alarm, Motion & Alarm, and Motion | Alarm.
3) Check the checkbox of **Select All** and click **Copy** to copy settings of this day to the whole week. You can also check any of the checkboxes before the date and click **Copy**.
4) Click **OK** to save the settings and exit the **Edit Schedule** interface.

6. Click **Advanced** to configure advanced record parameters**.**
7. Click **Save** to validate the above settings.

Playback



Playback Interface Introduction

No.	Name	Description
1	Channel List	Displays the list of channels and the playing status of each channel.
2	Playback Window	Displays the image of channel.
3	Play Control Bar	Play control operations are supported.
4	Time Line	Displays the time bar and the records marked with different colors.
5	Playback Status	Displays the playback status, including channel number and playback speed.
6	Calendar	You can select the date to play.

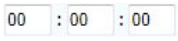
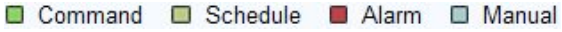
Start Playback

Steps:

1. Click **Playback** on the menu bar to enter playback interface.
2. Click the camera from the device list for playback.
3. Select the date from the calendar and click **Search**.
4. Click the **Play** button to play the video file searched on the current date.
5. Use the buttons on the toolbar to operate in playback mode.

Icon	Description	Icon	Description
	Select the window-division mode	/	Play/Pause
	Stop		Slow Forward
	Fast Forward		Play by single frame
	Stop All Playback		Capture picture during playback
	Download	/	Video Clip

Icon	Description	Icon	Description
	Open/Close audio		

6. You can drag the progress bar with the mouse to locate the exact playback point. You can also input the time in the textbox  and click button to locate the playback point.
   The color of the video on the progress bar stands for the different video types.
   

Log

You can view and export the log files at any time, including operation, alarm, exception and information of device.

Before you start

The Log function can be realized only when the device is connected with HDD or network disk. And make sure the HDD or network disk has been initialized for the first time to use.

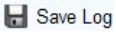
Steps:

1. Click **Log** on the menu bar to enter the Log interface.

Live View
Playback
Log
Configuration
Help | Logout | admin
No. Time Major Type Minor Type Channel No. Local/Remote User Remote Host IP
1 2013-11-07 09:13:13 Operation Local: Initialize HDD admin 0.0.0.0
2 2013-11-07 09:22:03 Operation Local: Add IP Camera admin 0.0.0.0
3 2013-11-07 09:22:03 Operation Local: Configure Parameters admin 0.0.0.0
4 2013-11-07 09:22:06 Information Start Recording D3 0.0.0.0
5 2013-11-07 09:32:01 Alarm Start Motion Detection D3 0.0.0.0
6 2013-11-07 09:32:14 Alarm Stop Motion Detection D3 0.0.0.0
7 2013-11-07 09:32:56 Information System Running State 0.0.0.0
8 2013-11-07 09:45:46 Alarm Start Motion Detection D3 0.0.0.0
9 2013-11-07 09:46:08 Alarm Stop Motion Detection D3 0.0.0.0
10 2013-11-07 09:46:15 Alarm Start Motion Detection D3 0.0.0.0
11 2013-11-07 09:46:37 Alarm Stop Motion Detection D3 0.0.0.0
12 2013-11-07 09:47:11 Alarm Start Motion Detection D3 0.0.0.0
13 2013-11-07 09:47:53 Alarm Stop Motion Detection D3 0.0.0.0
14 2013-11-07 09:48:07 Information Stop Recording D3 0.0.0.0
15 2013-11-07 09:48:07 Exception IP Camera Disconnect 0.0.0.0
16 2013-11-07 09:48:56 Information Start Recording D3 0.0.0.0
17 2013-11-07 09:48:56 Alarm Start Motion Detection D3 0.0.0.0
18 2013-11-07 09:49:05 Alarm Stop Motion Detection D3 0.0.0.0
19 2013-11-07 09:52:55 Information System Running State 0.0.0.0
20 2013-11-07 09:53:05 Information S.M.A.R.T. Information 5 0.0.0.0
21 2013-11-07 10:01:31 Alarm Start Motion Detection D3 0.0.0.0
Total 30 Items First Page Prev Page 1/1 Next Page Last Page
Search Log
Major Type
All Types
Minor Type
All Types
Start Time
2013-11-06 00:00:00
End Time
2013-11-07 23:59:59
Save Log

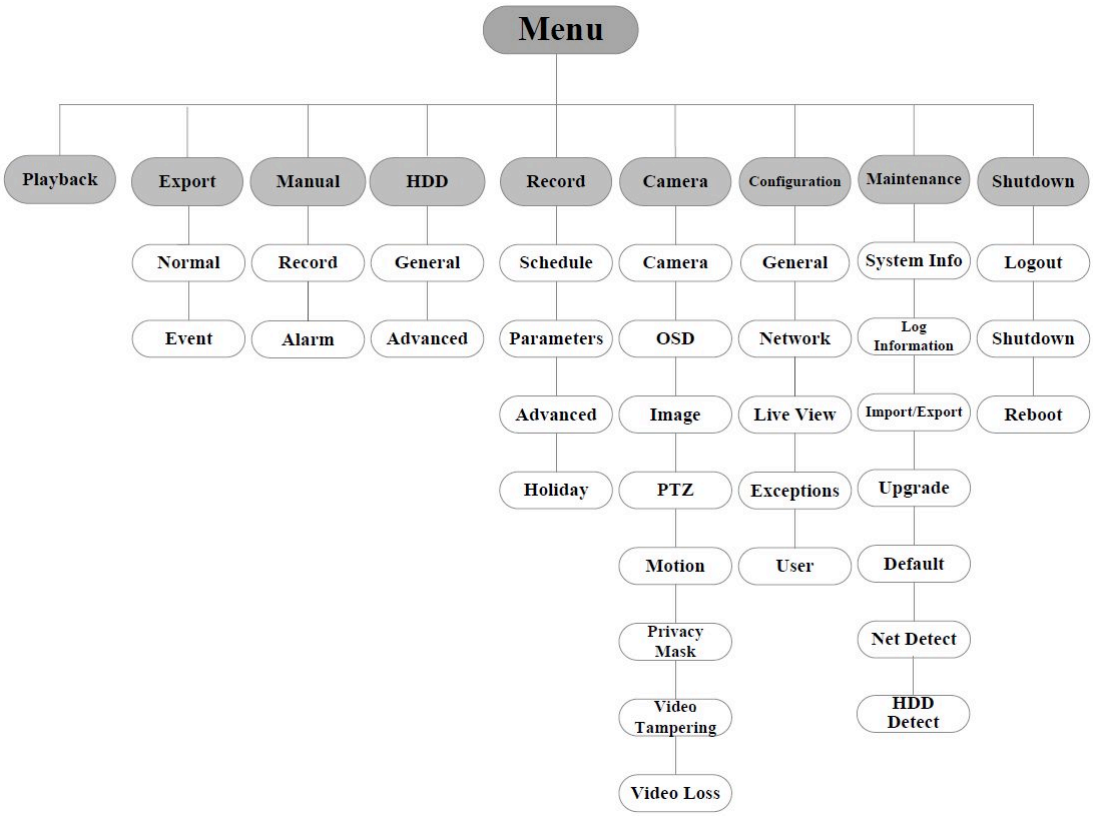
2. Set the log search conditions to refine your search, including the Major Type, Minor Type, Start Time and End Time.
3. Click the **Search** button to start searching log files.
4. The matched log files will be displayed on the list shown below.

   Up to 100 log files can be displayed each time.

   You can click the  button to save the searched log files to local directory.

Menu Operation

Menu Structure



Startup and Shutdown

Proper startup and shutdown procedures are crucial to expanding the life of the NVR.

To start your NVR:

1. Check the power supply is plugged into an electrical outlet. It is HIGHLY recommended that an Uninterruptible Power Supply (UPS) be used in conjunction with the device. The Power indicator LED on the front panel should be red, indicating the device gets the power supply.
2. Turn on the power switch on the rear panel to start the NVR immediately.

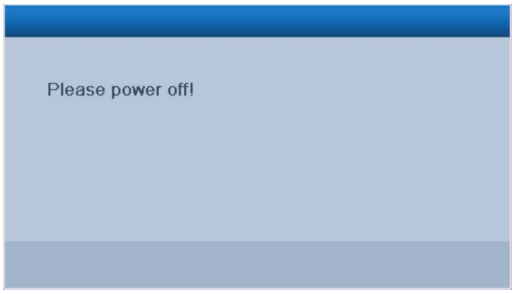
To shut down the NVR:

1. Enter the Shutdown menu.

   Menu > Shutdown

2. Select the **Shutdown** button.
3. Click the **Yes** button.

4. Shut the power switch down when the shutdown attention pops up.



After the device starting up, the wizard will guide you through the initial settings, including modifying password, date and time settings, network settings, HDD initializing, and recording.

Live View

Some icons are provided on screen in Live View mode to indicate different camera status. These icons include:

Live View Icons

In the live view mode, there are icons at the right top of the screen for each channel, showing the status of the record and alarm in the channel, so that you can find problems as soon as possible.

Alarm (video loss, video tampering, motion detection or sensor alarm).

Record (manual record, schedule record, motion detection or alarm triggered record)

Alarm & Record

Adding IP Cameras

You should add the online IP cameras to enable the live view and recording function.

You can search and add the online IP cameras by following the startup wizard, or according to the following steps.

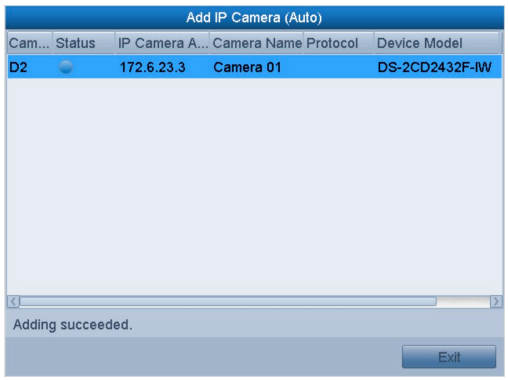
Steps:

1. Right-click the mouse when you in the live view mode to show the live view toolbar

2. Select the corresponding icon (Auto) or (Manual) on your demand to add IP camera.

   - **Auto**

     The device will add the detected IP cameras or encoders automatically by the default user name and password of administrator.

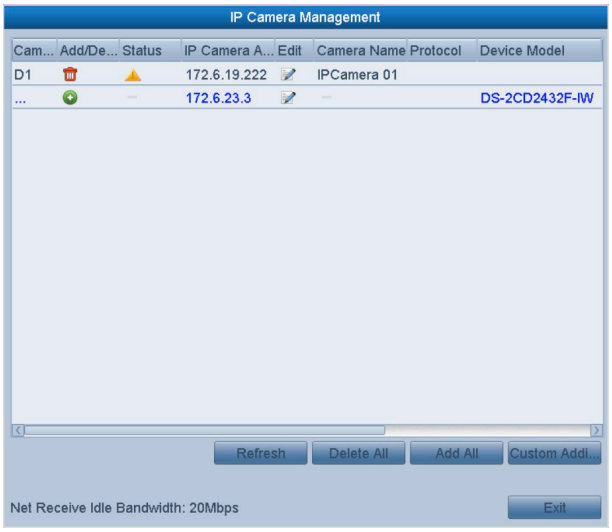


If the user name and password is changed, the auto adding of IP camera will be failed, you may add it manually.

- **Manual**

1. To add the online cameras with same network segment:

   1) The detected online camera will be listed in the camera list, as shown in the figure below.



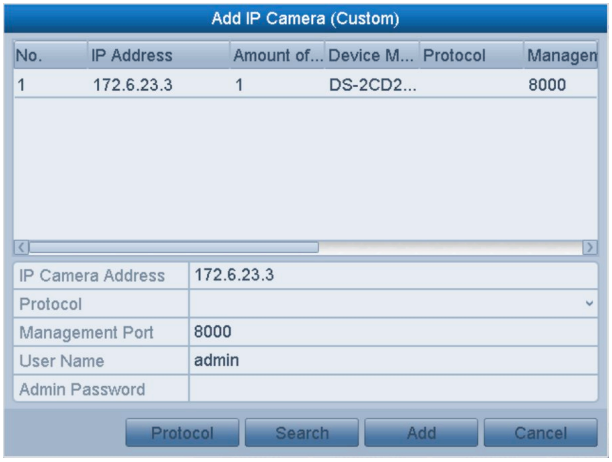
   2) Click the button to add the camera.

Explanation of the icons:

Icon	Explanation	Icon	Explanation
	Edit basic parameters of the camera		Add the detected IP camera.
	The camera is connected; you can click the icon to get the live view of the camera.		The camera is disconnected; you can click the icon to get the exception information of camera.
	The camera is connected.		Advanced settings of the camera.
	Delete the IP camera		

2. To custom add the online cameras:

   1) Click the **Custom Adding** button in the manual add interface to pop up the Add IP Camera (Custom) interface.



2) You can edit the IP address, protocol, management port, and other information of the IP camera to be added.
3) Click **Add** to add the camera.

Record Settings

Before you start:

Make sure that the HDD has already been installed. If not, please install a HDD and initialize it. You may refer to the user manual for detailed information.

Purpose:

Two kinds of record types are introduced in the following section, including Instant Record and All-day Record. And for other record types, you may refer to the user manual for detailed information.

NOTE

After rebooting all the manual records enabled are canceled.

Instant Record

On the live view window of each channel, there is a quick setting toolbar which shows on the bottom of the window when you click on it.

Click the icon to enable the record, and the icon turns to . And click icon to disable the record, then the icon turns to .

All-day Record

Steps:

1. Right-click the mouse when you in the live view mode to show the live view toolbar.

2. Select (Continuous Record) or (Motion Detection Record) on your demand.
3. And click the **Yes** button in the popup Attention message box to confirm the settings.
   Then all the channels will start to record in the selected mode.

Playback

Play back the record files of a specific channel in the live view menu. Channel switch is supported.

- **OPTION 1**

Choose a channel under live view using the mouse and click the button in the shortcut operation menu.

NOTE

Only record files recorded during the past five minutes on this channel will be played back.

- **OPTION 2**

Steps:

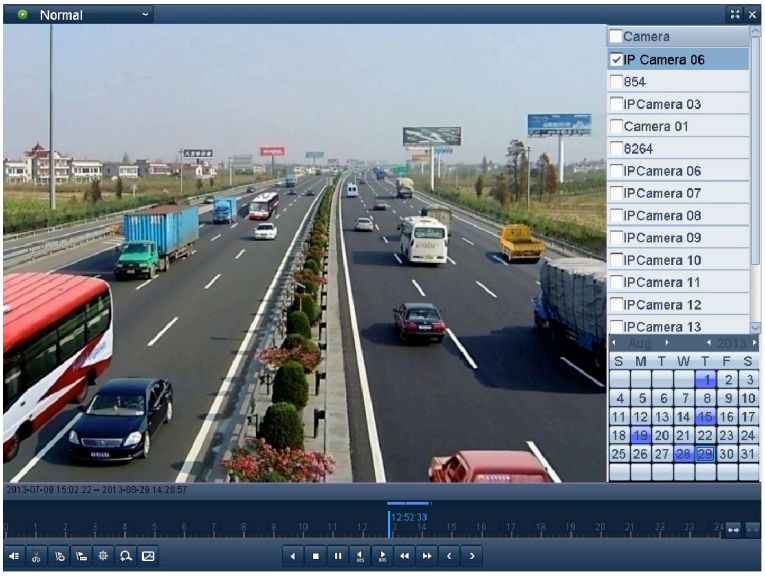
1. Enter the Playback menu.

   Right-click the mouse when you in the live view mode to show the live view toolbar, and select to enter the playback interface.

   Under multi-screen live view, record files of the top left channel (not masked) will be played back.

2. Playback management.

   The toolbar in the bottom part of Playback interface can be used to control playing process.



Just check the channel or channels if you want to switch playback to another channel or execute simultaneous playback of multiple channels.

Backup

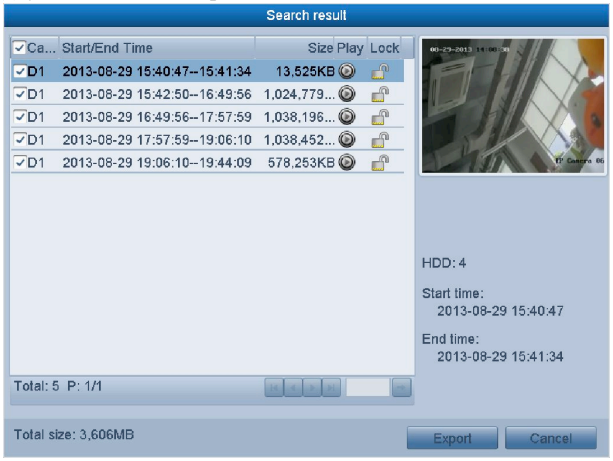
Recorded files can be backed up to various devices, such as USB flash drives, USB HDDs or a DVD writer.

Steps:

1. Enter Video Export interface.

   Menu > Export > Normal

2. Choose the channel(s) you want to back up and click on the **Search** button.



3. Select record files you want to back up.

   Click to play the record file if you want to check it.

   Check the checkbox before the record files you want to back up.

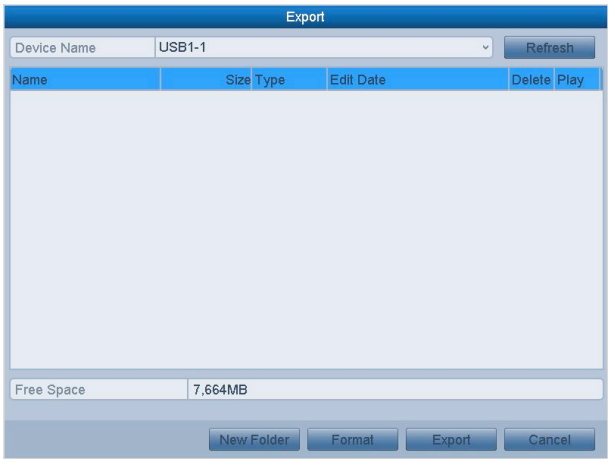
   The size of the currently selected files is displayed in the lower-left corner of the window.

4. Click **Export** button to enter the USB device management interface.

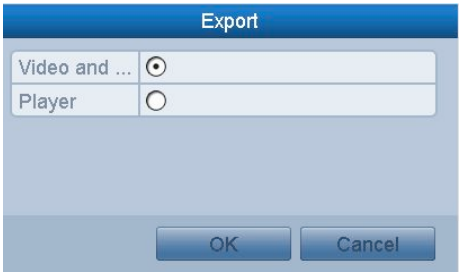
   If the inserted USB device is not recognized:

   - Click the **Refresh** button.
   - Reconnect device.
   - Check for compatibility from vendor.

   You can also format USB flash drives or USB HDDs via the device.



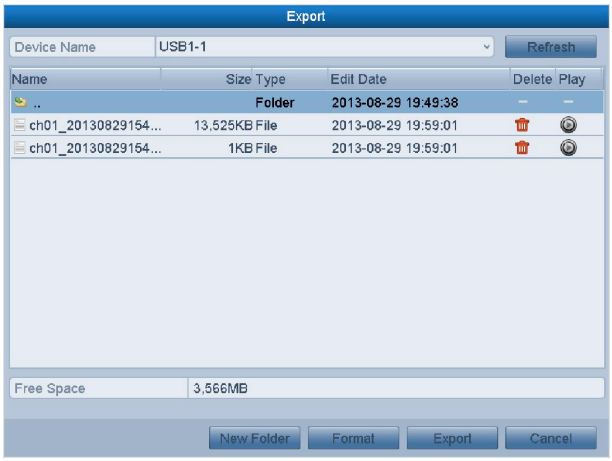
5. Click Export button and select to export the video and log files or the player to the backup device. Click OK to confirm.



Stay in the Exporting interface until all record files are exported with pop-up message box “Export finished”.

6. Check backup result.

Choose the record file in Export interface and click button to check it.



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